## SRF CAVITY MANUFACTURING

## Tuesday 01/12/20

| Chicago Time                                                 | Duration | Title                                                             | Participants            | Institute   |  |  |  |
|--------------------------------------------------------------|----------|-------------------------------------------------------------------|-------------------------|-------------|--|--|--|
| Topic-1: Niobium specs for high-Q0 cavities                  |          |                                                                   |                         |             |  |  |  |
| 9:10 AM                                                      | 0:05     | Introduction                                                      | A Puntambekar           | RRCAT       |  |  |  |
|                                                              |          |                                                                   | L Monaco                | INFN        |  |  |  |
|                                                              | 0:30     |                                                                   | J Rathke                | FRIB        |  |  |  |
|                                                              |          |                                                                   | E Cenni                 | CEA         |  |  |  |
| 9:15 AM                                                      |          | Which issues in achieving required RRR and grain size?            |                         |             |  |  |  |
|                                                              |          | Which are the qualified vendors today?                            | S Chandrasekaran / G Wu | FNAL        |  |  |  |
|                                                              |          |                                                                   | G Olivier               | IN2P3       |  |  |  |
|                                                              |          | Introduction by moderators followed by open discussion.           | D Sertore / M Bertucci  | INFN        |  |  |  |
|                                                              |          |                                                                   | V K Jain / S M Bagre    | RRCAT       |  |  |  |
|                                                              |          |                                                                   | A Wheelhouse            | STFC        |  |  |  |
| Topic-2 :Cavity and sub-components EBW and handling:         |          |                                                                   |                         |             |  |  |  |
|                                                              | 0:45     |                                                                   | J Rathke                | FRIB        |  |  |  |
|                                                              |          | Vertical vs. horizonthal EBW: pro vs. cons?                       | E Cenni                 | CEA         |  |  |  |
| 9:45 AM                                                      |          | Where does the inclusions and scratches might come from nowadays? |                         |             |  |  |  |
|                                                              |          | Which are the reference procedure for a clean assembly?           | M Foley / L Ristori     | FNAL        |  |  |  |
| 3.43 AIVI                                                    |          | Forming: how to control control profile and thinning?             | G Olivier               | IN2P3       |  |  |  |
|                                                              |          |                                                                   | L Monaco                | INFN        |  |  |  |
|                                                              |          | Introduction by moderators followed by open discussion.           | V K Jain / S M Bagre    | RRCAT       |  |  |  |
|                                                              |          |                                                                   | A Wheelhouse            | STFC        |  |  |  |
| 10:30 AM                                                     | 0:10     | Break                                                             |                         |             |  |  |  |
| Topic-3: Cavity and subcomponents manufacturing diagnostics: |          |                                                                   |                         |             |  |  |  |
|                                                              | 1:00     | Eddy current scanning: is it still needed?                        | J Rathke                | FRIB        |  |  |  |
| 10:40 AM                                                     |          | Which diagnostic during manufacturing? Visuals, Replicas, XRF?    | E Cenni                 | CEA         |  |  |  |
|                                                              |          | And when in the cycle: after EBW, after treatments?               |                         |             |  |  |  |
|                                                              |          | Which other non-destructive diagnostic?                           | M Foley / L Ristori     | FNAL        |  |  |  |
|                                                              |          | Is grinding harmful to cavity performances?                       | G Olivier               | IN2P3       |  |  |  |
|                                                              |          | is grinding narrinar to cavity performances:                      | D Sertore / L Monaco    | INFN        |  |  |  |
|                                                              |          | Introduction by moderators followed by open discussion.           | V K Jain / S M Bagre    | RRCAT       |  |  |  |
|                                                              |          |                                                                   | M Ellis                 | STFC        |  |  |  |
| 11:40 AM                                                     | 0:20     | Closing remarks / Summary                                         | Avinash / Laura         | RRCAT/ INFN |  |  |  |
| 12:00 AM                                                     | 0:00     | Session End                                                       |                         |             |  |  |  |
|                                                              |          | Wadnesday 02/12/20                                                |                         |             |  |  |  |

## **Wednesday 02/12/20**

| Time                                                                                        | Duration | Title                                                                                                                                                                                                     | Presenter                       | Institute |  |  |  |
|---------------------------------------------------------------------------------------------|----------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------|-----------|--|--|--|
| Topic-4: Cavity integration (tank, tuner, etc.) in helium tank (aka dressing or jacketing): |          |                                                                                                                                                                                                           |                                 |           |  |  |  |
| 7:30 AM                                                                                     | 0:05     | Introduction                                                                                                                                                                                              | A Puntambekar                   | RRCAT     |  |  |  |
|                                                                                             |          |                                                                                                                                                                                                           | L Monaco                        | INFN      |  |  |  |
|                                                                                             | 1:00     | How challenging are requirements for vendor? How integration qualification is performed?                                                                                                                  | J Rathke                        | FRIB      |  |  |  |
|                                                                                             |          |                                                                                                                                                                                                           | E Cenni / V Hennion             | CEA       |  |  |  |
| 7:35 AM                                                                                     |          | Cavity inner volume during integration: vacuum or not?                                                                                                                                                    |                                 |           |  |  |  |
|                                                                                             |          | How to control of cavity frequency and prevent field-flatness degradation?                                                                                                                                | M Foley / G Eremeev / L Ristori | FNAL      |  |  |  |
|                                                                                             |          |                                                                                                                                                                                                           | G Olivier                       | IN2P3     |  |  |  |
|                                                                                             |          |                                                                                                                                                                                                           | A Bosotti / R Paparella         | INFN      |  |  |  |
|                                                                                             |          | Introduction by moderators followed by open discussion.                                                                                                                                                   | V K Jain / S M Bagre            | RRCAT     |  |  |  |
|                                                                                             |          |                                                                                                                                                                                                           | M Ellis                         | STFC      |  |  |  |
| Topic-5 : Quality control of cavity production:                                             |          |                                                                                                                                                                                                           |                                 |           |  |  |  |
|                                                                                             | 0:45     | Has been External Quality Control (Additional QA/QC asked by orderers) applied? How to successfully transfer and fulfill required specifications? Introduction by moderators followed by open discussion. | J Rathke                        | FRIB      |  |  |  |
|                                                                                             |          |                                                                                                                                                                                                           | C Cloue / V Hennion             | CEA       |  |  |  |
| 8:35 AM                                                                                     |          |                                                                                                                                                                                                           |                                 |           |  |  |  |
|                                                                                             |          |                                                                                                                                                                                                           | T Digrazia / M Luedke           | FNAL      |  |  |  |
|                                                                                             |          |                                                                                                                                                                                                           | G Olivier                       | IN2P3     |  |  |  |
|                                                                                             |          |                                                                                                                                                                                                           | L Monaco                        | INFN      |  |  |  |
|                                                                                             |          |                                                                                                                                                                                                           | V K Jain / S M Bagre            | RRCAT     |  |  |  |
|                                                                                             |          |                                                                                                                                                                                                           | M Ellis                         | STFC      |  |  |  |
| 9:20 AM                                                                                     | 0:10     | Closing remarks / Summary                                                                                                                                                                                 | A Puntambekar                   | RRCAT     |  |  |  |
| 9:20 AIVI                                                                                   |          |                                                                                                                                                                                                           | L Monaco                        | INFN      |  |  |  |
| 9:30 AM                                                                                     | 0:15     | Break                                                                                                                                                                                                     |                                 |           |  |  |  |
|                                                                                             |          |                                                                                                                                                                                                           |                                 |           |  |  |  |